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10/581,335	12/14/2006	Katsuki Kusunoki	Q79257	6238

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EXAMINER	
PATHAK, SHANTANU	
ART UNIT	PAPER NUMBER
2829	

NOTIFICATION DATE	DELIVERY MODE
04/21/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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DETAILED ACTION

1. Applicant's amendment after final, dated April 12th, 2010, is in response to the Examiner's final rejection, dated December 10th, 2009.

2. Claims 1-11 are pending in the instant application.

3. Rule 130, 131 or 132 affidavits will not be considered because there is no English translation of the document.

Response to Arguments

4. Applicant's arguments with respect to claims 1-11 have been fully considered but they are not persuasive.

5. The following is an examiner's statement of reasons for non-persuasiveness. **With regard to claims 1-11**, Applicant's argue that "Shuji teaches away from modification with Araghi." More specifically, "...Shuji disparages splitting the wafer obliquely" and therefore, "it is for this reason (that Shuji teaches that a slanted fracture line is not intended) that Shuji teaches away from a combination with the slanted center line of Araghi as suggested by the Examiner." The Examiner respectfully traverses this argument. The cleaving line 'a' as taught by Shuji is intended to be vertical only in the case where the first and second grooves are aligned. No mention is made as to the preferred cleaving lines in the case where the first and second grooves are not aligned. Therefore, Shuji cannot teach away from a feature it does not mention. Lines 'b' and 'c' are not so much predetermined cleaving lines that are meant to be avoided, but rather, are undesirable consequences of cracking and chipping that Shuji intends to correct (Abstract).

6. Applicants' further argue that "a skilled artisan would not (and could not) have applied the cutting method of Araghi to the substrate of Shuji from a technical perspective" because since "it is impossible to control the angle of oblique division." Moreover, "Shuji teaches that the sapphire substrate does not have cleavability because of the characteristic hexagonal system of the crystal structure of single crystal sapphire of the substrate." The Examiner respectfully traverses this argument. The methods proposed by Shuji are directed to the purposeful cleaving of the sapphire substrate along line 'a', thereby forming a vertical line of division (i.e. ~90°) when the first and second grooves are aligned. In the invention of Shuji, it desirable to prevent chipping and cracking along lines 'b' and 'c'. It is not a purpose of Shuji to control oblique lines of division because the lines of division are intended to be vertical due to the aligned first and second grooves. Therefore, Shuji does not teach that it is impossible to control the angle of oblique division.

7. Lastly, Applicants' argue that "a skilled artisan would not have optimized the teachings of the cited references as suggested" because "a skilled artisan would understand Shuji to disclose that it is impossible to control the angle at which the sapphire substrate is divided obliquely." The Examiner respectfully traverses this argument. Based on the arguments above, Applicants' argument that "it is impossible to control the angle at which the sapphire substrate is divided obliquely" is rendered moot. Furthermore, the Examiner's interpretation of optimizing the cutting angle of the sapphire substrate is based on the knowledge that Araghi teaches the advantage of oblique division where grooves are not aligned. A skilled artisan would have modified Shuji with the advantage of oblique division where grooves are not aligned, as taught by Araghi, even though Shuji teaches a sapphire substrate and Araghi teaches a silicon substrate

because a skilled artisan would have taken differences into account with respect to cleavability (i.e. material characteristics) of any particular substrate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHANTANU C. PATHAK whose telephone number is (571) 270-5727. The examiner can normally be reached on Monday-Thursday, 10:00 a.m.-4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on (571) 272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SHANTANU C PATHAK/
Examiner, Art Unit 2829

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